

PA 227T95

USSR/Physics - Boiling

Sep 52

"Boiling of Gas-Filled Liquid," Ye.I. Nesis, Ya.I. Frenkel' (Deceased), Dneprodzerzhinsk Night School Metallurgical Inst imeni Arsenichev

"Zhur Tekh Fiz" Vol 22, No 9, pp 1500-1505

Analyze soln of gas in liquids in the metastable state; i.e., when the total vapor tension of dissolved gas and solvent exceeds the external pressure. States that such system passes into a stable state by means of boiling. Notes that velocity of boiling does not depend on ratio of partial satns, but only on total satn. Received
5 Apr 52.

227T95

NESIS, YE. I.

PA 227T96

USSR/Physics - Boiling

Sep 52

"Boiling Under Real Conditions," Ye.I. Nesis, Dneprodzerzhinsk Night School Metallurgical Inst imeni Arsenichev

"Zhur Tekh Fiz" Vol 22, No 9 pp 1506-1512

Analyzes the factors that facilitate boiling of liquid under actual circumstances. Establishes the shape of the bubbles on the bottom of the vessel and the mechanism governing their sepn from the bottom and their upward flow. Analyzes the influence exerted by pores of the vessel walls. Indebted to Ya.I. Frenkel' (deceased). Received 5 Apr 52.

227T96

NESIS, Ye.I.

Second-order phase transitions in two-dimensional dipole lattices.
Ukr. fiz. zhur. 4 no.3:363-371 Ky-Je '59. (MIRA 13:2)

1.Stavropol'skiy pedagogicheskiy institut.
(Crystal lattices)

Card 1/2

ACCESSION NR: AR3000541

during the half-period of rarefaction, so that a continuous growth of the bubbles is observed. At the same time, the rate of growth of bubbles having a relatively large radius r is proportional to r^2 ; decrease of critical dimensions of the bubble is more pronounced on increase of amplitude of the oscillations. --V. Gertsoskiy

DATE ACQ: 21 May 63

ENCL: 00

SUB CODE: 00

2/301/60/000/009/031/031
2019/0054

AUTHOR: Frankl', P. I., Doctor of Physical and Mathematical
Sciences, Professor

TITLE: Discussion of Problems of Hydroaerodynamics and
Mathematical Physics

PERIODICAL: Vestnik vysshey shkoly, 1960, No. 9, pp. 47-48
TEXT: A Conference on Hydroaerodynamics and Mathematical Physics was
held at Mel'nik in May 1960 on the initiative of the Filko-
matematicheskiy fakul'tet Kabardino-Balkarskoy universiteta (Department
of Mathematics and Mathematics of the Kabardino-Balkarian University).
Fourteen reports were delivered at the conference by delegates of five
higher institutes of learning and scientific institutes of the Northern
Caucasus, as well as of the higher institutes of learning from other
oblasts and republics. The reports by Professor P. I. Frankl' and
-Senior Teacher E. A. Lomkin (Kabardino-Balkarian University) on "The Flow
Around Profiles with a Local Supersonic Zone Ending in a Compression

Card 1/4

Shock", by Professor E. A. Lomkin of Saratovskiy universitet
(Saratov University), on "The Problems of the Chebyshev Equation with
Singular Points on the Parabolic Line", and Senior Teacher E. A. Lomkin
of Saratovskiy universitet (Saratov University) on "The Application of
the Chebyshev Method to Certain Boundary-value Problems in the
Theory of Transonic Currents" dealt with the theory of transonic currents.
Problems of theoretical hydroaerodynamics were dealt with in the report by
I. K. Gutan, Doctor of Physical and Mathematical Sciences, of the
Kabardino-Balkarian branch of the Institute of Mathematics and Mechanics
(Kabardino-Balkarskoye otdel'noye Institut prikladnykh matematik i mekhaniki
im. M. V. Lomonosova) "On the Theory of α -Flow in a Viscous
Medium" (the report dealt with the theory of α -flow in a viscous
medium within the General Theory of Viscous Circulations - Mat'kovskiy
Aerodinamicheskiy Institut) dealt with the theory of α -flow in a viscous
medium within the General Theory of Viscous Circulations - Mat'kovskiy
Student of the Kabardino-Balkarian University, dealt with a report on "The
Vertical Structure of the Atmosphere", E. A. Lomkin and E. A. Lomkin, post-
graduate students of the Kabardino-Balkarian University, offered
"Examples of the Notation of Cosmic Gas Masses" and "The Role of a Star

Card 2/4

as Steady Radial Flow of Gas Particles and Photon Gas". A. A. Artyukov,
Post-graduate student of the Kabardino-Balkarian University, in his report
dealt with "Some Problems of the Plane-parallel Flow of an Inviscid Fluid in
Channels". Senior Teacher E. I. Ben-Shlomo of the Kabardino-Balkarian
Pedagogicheskoy Institut (Saratovskiy Pedagogicheskoy Institut) delivered a
report on "Semi-inverse Methods in the Theory of Motion of Bound Water
with a Free Surface". Problems of the theory of motion of bound water
in three reports by Senior Teacher E. I. Ben-Shlomo of the Kabardino-Balkarian
University, Senior Teacher E. I. Ben-Shlomo of the Kabardino-Balkarian
Pedagogicheskoy Institut (Saratovskiy Pedagogicheskoy Institut), and Senior
Teacher E. I. Ben-Shlomo of the Kabardino-Balkarian University (Kabardino-
Balkarskiy politekhnicheskiy Institut (Odessa Polytechnic Institute))
dealt with the theory of oscillations. Special attention was paid to a
report by Professor E. A. Lomkin who suggested a greatly improved
method of calculating transonic currents, is a report by Senior Teacher
Gutan who suggested an interesting solution to one of the most important
problems of local hydroaerodynamic phenomena, and a report by Senior
Teacher Artyukov who gave an ingenious explanation of an important aerodynamic

Card 3/4

phenomenon.

ASSOCIATION:

Kabardino-Balkarskiy gosudarstvennyy universitet
(Kabardino-Balkarian State University)

BR

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2/044/62/000/002/001/092
G111/0222

AUTHOR: Nesis, Ye. I.
TITLE: On some properties of matrix-substitutions
PERIODICAL: Referativnyy zhurnal, Matematika, no. 2, 1962, 22,
abstract 2A163. ("Sb. tr. Stavropol'sk. gos. ped. in-ta",
1960, vyp. 19, 41-52)
TEXT: Let $D = (d_{ik})_1^n$ be a matrix of order $n \times 2^m$, its elements
being given by the following conditions:

$$d_{ik} = \begin{cases} 1 & \text{for } k = 2i - 1, \\ 0 & \text{for } k \neq 2i - 1, \end{cases} \quad d_{\frac{n}{2} + i, k} = \begin{cases} 1 & \text{for } k = 2i \\ 0 & \text{for } k \neq 2i \end{cases}$$

($i = 1, 2, \dots, \frac{n}{2}$) Let $e = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$, $b = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$, $B_k = e \times e \times \dots \times b \times \dots \times e$
where the number of factors of the direct product is equal to n , and
is at the k -th place (Mal'tsev A. I., "Osnovy lineynoy algebry"
[Fundamentals of linear algebra], 1948, Gostekhizdat, p. 208).

Card 1/2

On some properties of matrix- . . . S/044/62/000/002/001/092
C111/C222
Finally, let $B = B_1 + B_2 + \dots + B_m$. The eigenvalues of the matrices
D, B, DB and B^2 are calculated, which find applications in physics.

[Abstracter's note: Complete translation.]

Card 2/2

16 1500

162/000/000/001/072
0111/072

AUTHOR: Nesis, Ye.I.

TITLE: On a simplification in calculating the trace of a power of a symmetrical positive matrix

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 29, abstract 5A184. ("Uch. zap. Kabardino-Balkarsk. un-t", 1961, no. 13, 72-74)

TEXT: It is described how the determination of the trace of the n -th power of a symmetrical positive matrix A of order m and rank r can be reduced to the determination of the trace of the n -th power of a matrix with the smaller order l ($l \leq m$). A formula is given for $\text{sp } A^n$ in the case $l = 2$. √B

[Abstracter's note: Complete translation.]

Card 1/1

26.5400
24.1800

38352
S/058/62/000/005/064/119
A057/A101

AUTHOR: Nesis, Ye. I.

TITLE: The effect of ultrasonic waves on the boiling up of liquids

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 46, abstract 5G422 (V sb. "Primeneniye ul'traakust. k issled. veshchestva", no. 13, Moscow, 1961, 115-122)

TEXT: The start of the process of boiling in a liquid - the boiling up, is characterized by the formation of a great number of nuclei in the liquid, i.e. of steam or gas bubbles which grow and rise to the surface of the liquid. Sound waves propagating in this liquid accelerate the boiling up process. An analysis of the equilibrium conditions of the bubbles in presence of a sound wave demonstrates, that the periodical changes of pressure in the sound wave lead to the decrease of the critical radius of the nuclei, i.e., to the increase in the number of nuclei, which have a tendency to unlimited growth. The radius of the critical nucleus enters in the exponent, which characterizes the boiling rate. Hence a sharp increase of the boiling rate can be caused by a small decrease of the critical nucleus.

[Abstracter's note: Complete translation]

A. Polyakova

Card (1/1)

24.7000

S/058/63/000/001/088/120
A160/A101

AUTHOR: Nesis, Ye. I.

TITLE: The sound propagation velocity in a solid near Curie's point

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 75, abstract 18520
(In collection: "Primeneniye ul'traakust. k issled. veshchestva".
no. 16. M., 1962, 155 - 159)

TEXT: With the help of Landau's theory of second-type phase transitions
an expression was obtained for the sound velocity jump at the point of the phase
transition

$$\Delta u^2 = \frac{1}{\beta} \left(\frac{d\alpha}{dv} \right)^2_{v=v_0}, \quad (1)$$

where v is the specific volume, α and β - the linear and the quadratic coefficients (depending on the temperature and the volume) of expanding the free energy in powers of the square of the ordering degree ξ . It follows from (1)

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The sound propagation velocity in a...

S/058/63/000/001/088/120
A160/A101

that the sound velocity in an ordered (ferromagnetic) state is higher than in a disordered (paramagnetic) state. It is noted that even a qualitative experimental examination of (1) may simultaneously be an examination of the primary assumptions of Landau's theory on the type of expanding the thermodynamic potential by ξ at the singular point corresponding to the phase transition.

JA

N. Kuznetsov

[Abstracter's note: Complete translation]

Card 2/2

NESIS, Ye.I., kand.fiz.-matem.nauk, dotsent (Stavropol')

Present-day concepts of the liquid state of matter. Fiz. v shkole
22 no.2:83-88 Mr-Apr '62. (MIRA 15:11)
(Liquids)

ACCESSION NR: AP4010406

S/0185/63/006/012/1335/1344

AUTHOR: Nesis, Ye. I.

TITLE: Thermodynamics of a three-dimensional lattice with weak interaction between the planes in an Ising model. I.

SOURCE: Ukrayins'kyi fiz. zhurnal, v. 8, no. 12, 1963, 1335-1344

TOPIC TAGS: Ising lattice, Ising model, phase transition, second-order phase transition, particle interaction, plane interaction, distribution function, thermodynamic functions, thermodynamics, transition point, Landau theory

ABSTRACT: This analysis was made to clarify whether the fact that the heat capacity in a two-dimensional Ising lattice, which at present is the only model of a system in which a second-order phase transition occurs and for which a strict determination of the thermodynamic functions is possible, does not undergo a final jump at the transition point, as follows from theory, but tends toward infinity in proportion to $\ln^2(T - T_0)$, is due to the two-dimensionality of the model. A three-dimensional cubic Ising model is considered in which the interaction between the planes is small in comparison with the interaction of particles within the planes kT . When the matrix of the interaction of the system is expanded into a

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ACCESSION NR: AP4010406

series by this small parameter, the distribution function can be referred to one plane. For sufficiently high temperatures the correlations may be confined to those between the nearest atoms and the specific distribution function and thermodynamic functions can be calculated to the end. The finding that near the transition point the heat capacity tends toward infinity in proportion to $\ln^2 (T - T_0)$ is based on an assumption of the series ($\Sigma \phi_{ij}$), the validity of which is far from evident. "The author thanks Professor Lifshits' for guidance and aid in the work." Orig. art. has: 30 formulas.

ASSOCIATION: Stavropol's'kiy pedinstytut (Stavropol' Pedagogical Institute)

SUBMITTED: 03Apr63

DATE ACQ: 20Jan64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 001

Card 2/2

NESIS, Ye.I.

Editor's mail. Fiz. v shkole 23 no.4:102-103 J1-Ag '63.

(MIRA 17:1)

1. Pedagogicheskiy institut, Stavropol'.

ACC NR: AR6016454 (N) SOURCE CODE: UR/0124/65/000/012/B036/B036 27
AUTHOR: Nesis, Ye. I.; Chekanov, V. V.
TITLE: Effect of ultrasound on the growth of heterophase fluctuations in a liquid
SOURCE: Ref. zh. Mekhanika, Abs. 12B244
REF SOURCE: Sb. Primeneniye ul'traakust. k issled. veshchestva. Vyp. 20. M., 1964, 11-14
TOPIC TAGS: vapor condensation, ultrasonic wave, heat transfer rate
ABSTRACT: The authors consider the behavior of vapor bubbles in a liquid in the field of an ultrasonic wave with regard to heat exchange between liquid and bubble. If it is assumed that the time required for carrying off the heat released during condensation determines the rate of collapse of a bubble, then a bubble collapses at a slower rate than it grows. This results in growth of vapor bubbles which are below critical size. V. Akulichev. [Translation of abstract]
SUB CODE: 20

Card 1/1

NESIS, Ye.I.

Causes of the noise engendered in the boiling of pure liquids and mixtures. Inzh.-fiz. zhur. 7 no.9:113-117 S '64.

(MIRA 17:12)

1. Pedagogicheskiy institut, Stavropol'.

ACCESSION NR: AP4012033

S/0185/64/009/001/0081/0086

AUTHOR: Nesis, Ye. I.

TITLE: Thermodynamics of a three-dimensional lattice with a strong interaction between planes in an Ising model. II.

SOURCE: Ukrayins'ky'y fizy*chny'y zhurnal, v. 9, no. 1, 1964, 81-86

TOPIC TAGS: crystal, lattice structure

ABSTRACT: In part I of this work (Ye. I. Nesis, Ukrayins'ky'y Fizy*chny'y Zhurnal, v. 8, 1963, 12) a cubic lattice was considered the interaction between whose planes is weak. In this instance the second limiting case is considered, namely that of a strong interaction. By expanding the inverse matrix into a series it is shown that the spatial distribution function differs from the plane function by some correction factor. This factor is a series consisting of inter-atomic correlations of the plane lattice. An expression is derived for the distribution function and the thermodynamic functions at low temperatures. It is demonstrated that near the transition point the thermal capacity curve for the three-dimensional model with strong interaction between planes rises more steeply

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ACCESSION NR: AP4012033

than that for the plane lattice. "I express profound gratitude to Prof. I. M. Lifshy*ts for directing the work." Orig. art. has 24 formulas.

ASSOCIATION: Stavropol'sky*y Pedinsty*tut (Stavropol' Pedagogic Institute)

SUB CODE: PH

SUBMITTED: 03Apr63

NO REF SOV: 002

OTHER: 001

DATE ACQ: 14Feb64

ENCL: 00

Card 2/2

NESIE, Ye.I.; OZERETSKOVSKIY, G.A.

Volume pulsations of steam bubbles in a liquid. Izv. vys. uchen.
zav.; fiz. 8 no.1:39-41 '65. (MIRA 18:3)

1. Stavropol'skiy pedagogicheskiy institut.

NESIS, Ye.I. [Necle, IU.I.]

Two-layer and multilayer three-dimensional Ising lattices. Ukr.
fiz. zhur. 10 no.3:336-341. Mar '65. (MIRA 18:6)

1. Stavropol'skiy pedagogicheskiy institut.

NESIS, Ye.I.

Model of two Ising planes. Fiz.-met. i metalloved. 20
no.5:775-777 N '65. (MIRA 18:12)

1. Stavropol'skiy pedagogicheskiy institut. Submitted
October 6, 1964.

L 23176-66 EWT(1)/EPF(n)-2 WW

ACC NR: AF6001669

SOURCE CODE: UR/0053/65/087/004/0615/0653

AUTHOR: Nesis, Ye. I.

ORG: none

TITLE: Boiling of liquids

SOURCE: *Uspekhi fizicheskikh nauk*, v. 87, no. 4, 1965, 615-653

TOPIC TAGS: boiling, nucleate boiling, heat of vaporization, heat transfer, thermodynamic process

ABSTRACT: This is a review article summarizing recent research done on the physics of boiling and liquid-vapor phase transitions. The topics dealt with are the heat exchange mechanisms that operate during boiling and the different types of boiling (nucleate boiling, film boiling, and the intermediate state), including the mechanism of bubble formation and the critical nucleus size. The growth of the bubbles under different boiling conditions is described. Experimental methods for the study of boiling are discussed, including the photographic and acoustic methods. The nature of the sound accompanying the bubbling in heated and boiling liquids is analyzed. The thermodynamics of boiling is discussed and a theory of heat transfer as applied to boiling is developed. The discussion of the kinetics of the boiling

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UDC: 536.423.1

L 23176-66

ACC NR: AF6001669

process includes a detailed description of the physical process, derivation of a kinetic equation of boiling, and a detailed analysis of the phenomena accompanying boiling in real liquids. The article concludes with a section dealing with the boiling of mixtures and solutions. Orig. art. has: 14 figures and 17 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 125/ OTH REF: 124

Card 2/2 *efc*

L 35315-66

ACC NR: AP6026890

SOURCE CODE: UR/0020/65/165/004/0871/0873

AUTHOR: Nesis, Ye. I.

22
6

ORG: Stavropol' State Pedagogical Institute (Stavropol'skiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Mechanism of the separation of bubbles from a nonwetable horizontal plane

SOURCE: AN SSSR. Doklady, v. 165, no. 4, 1965, 871-873

TOPIC TAGS: mathematic analysis, boundary value problem

ABSTRACT: It is shown that FRITZ's (Phys. Zs. 36, 379, 1935) formula for the separation diameter as a function of the boundary-value angle θ of the surface tension and of the liquid and vapor densities does not apply to large values of θ , because it determines the maximal separation volume V_{max} whereas the actual separation volume may be less than V_{max} owing to violations of the condition of bubble shape stability. The initial volume (diameter) of the ascending bubble can be determined by from the dynamics of its growth and separation with the aid of variational methods; the corresponding formula is derived. The conditions for the onset of the mechanism of separation are specified. Since FRITZ's formula applies only to boundary-value angles $\theta < 100^\circ$, a new formula was derived for $\theta > 100^\circ$ when the dimension of the separating bubbles is no longer determined by the angle θ and becomes determined by the height of the bubble. This paper was presented by Academician A. N. Frumkin on 29 Apr 1965. Orig. art. has 3 figures and 14 formulas.

LJPRS: 36,455/

SUB CODE: 12/ SUBM DATE: 22Apr65/ ORIG REF: 002/ OTH REF: 004

Card 1/1 *ball*

UDC: 532.529.6

0916 2645

L 22903-66 EWT(1)/T IJP(c) GG

ACC NR: AP6006869

SOURCE CODE: UR/0181/66/008/002/0608/0610

AUTHOR: Nesis, Ye. I.

ORG: Stavropol' State Pedagogical Institute (Stavropol'skiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Influence of strong interaction between layers on the thermodynamics of the three dimensional Ising model ²¹ ~~21~~ ~~21~~

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 608-610

TOPIC TAGS: distribution function, thermodynamic analysis, second order phase transition, Curie point

ABSTRACT: This is a continuation of earlier work (FTT v. 7, 665, 1965), where the author has shown how the distribution function changes on going from a two-dimensional to a three-dimensional Ising lattice with weak interaction. The present communication is devoted to a different limiting case, when the parameter of the excitation between the planes is much larger than the parameter inside the planes (chain structure). The problem reduces to the calculation of a series of functions whose matrix describes a system whose chain consists of two unequal rigid parts. The behavior of the parameters of the function near the Curie point

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L 22903-66

ACC NR: AP6006869

and near the second-order phase transition point is discussed. It is shown that a strong interaction between the Ising planes leads to a simple shift of the second-order phase transition by an amount which can be evaluated. The author thanks I. M. Lifshits for valuable hints. Orig. art. has: 8 formulas.

SUB CODE: 20/ SUBM DATE: 20Sep65/ ORIG REF: 003/ OTH REF: 002

Card 2/2

B. 2

YESKOROD', S.

Two work cycles every 24 hours in cutter-loader-worked longwalls.
Mast. ugl. 3 no.6:10-11 Jg '54. (MLRA 7:7)

1. Nachal'nik uchastka shakhty no. 7 kombinata Stalinugol'.
(Coal mines and mining)

COLOMB, L.M.; Prinimali uchastiye: BYKOVA, L.I.; SHALIMOVA, G.V.:
NESKORODEVA, V.I.; KOVZHIN, L.A.

Structural and mechanical properties of vat brilliant green Zh as
suspensions or pastes. Khim.prom. no.8:531-535 Ag '61.
(MIRA 14:8)

1. Filial Gosudarstvennogo nauchno-issledovatel'skogo instituta
organicheskikh poluproduktov i krasiteley, g. Rubezhnoye.
(Dyes and dyeing)

NESKORODOVA, A.G.

Two cases of congenital neurogenic intestinal obstruction.
Pediatria 4 no.7:70-71 J1'63 (MIRA 16:12)

1. Iz Instituta pediatrii i akusherstva (dir. - kand. med.
nauk F.S.Baranovskaya, nauchnyy rukovoditel' - prof. T.V.
Loverde).

25(2)

AUTHOR:

Neskorod'yev, N., Engineer

SOV/29-59-1-14/26

TITLE:

Whirlwinds in Machines (Smerchi v mashinakh)

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 1, pp 23 - 24 (USSR)

ABSTRACT:

Investigations of storm currents causing whirlwinds induced scientists to design special apparatus working according to the principle of utilizing the energy of storm. In account of theoretical and experimental investigation results obtained by M. G. Dubinskiy, Doctor of Technical Sciences, S. Z. Kopelev, Candidate of Technical Sciences, and A. O. Matsuk, Engineer, it was possible to make a vortex pump "DKM" (colored insert sheet), which is smaller than a slide rule. The diameter of the whirling chamber is 50 mm, the diameter of the nozzle 12 mm, the total length 120 mm and the maximum diameter of the worm 150 mm. In spite of this, the pump can do big work. It works with compressed air, vapor or gas. Numerous tests have shown that such vortex vacuum pumps may be used successfully in various fields of engineering, especially where they are to work periodically. The advantages of the vortex vacuum pumps are that they are small and have

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Whirlwinds in Machines

SOV/29-59-1-14/26

no wearing parts. Their design is very simple. They are reliable workers and need no special care. They may be employed in building for drying concrete, in barometric chambers, in vacuum evaporators used in food, pharmaceutical and chemical industries, as well as in many other fields of engineering. In designing the vortex vacuum pumps their inventors succeeded in realizing Maxwell's idea; they built an apparatus which can separate the surrounding air in a warm and a cold portion. By regulating, two currents of air can be obtained simultaneously with temperatures of $+50^{\circ}$ and -50° . Moreover, it is possible to obtain an air current of $+150^{\circ}$ from the surrounding air by correspondent regulation. In a vortex refrigeration plant, the coolant is the cold air directly blown into the cooling chamber. Therein an intense air circulation is obtained, which renders vortex refrigeration plants more comfortable and economical than the usual refrigeration systems. Such plants may be used successfully in trains, on trawlers, in surgical hospitals, in silos, for the production of ice, for the freezing of foodstuffs and in many other cases that cannot be enumerated. The designers of the vortex vacuum pump have built some more apparatus

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Whirlwinds in Machines

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based on the same principle. So the vortex air separator which makes it possible to reduce too great a humidity of air. This apparatus may be used where it is desirable to collect and utilize the vapors of precious or harmful liquids in the air. Dust collectors, gas mixers, ejectors for the feeding of dusty and liquid fuels are based on the same principle. Besides, V. I. Akunov, in cooperation with the designers of the vortex apparatus, designed a number of vortex mills suitable to crush various materials, even highly viscous ones. Only part of possible uses have been enumerated here. There is no doubt that these apparatus will have a big future. Such vortex apparatus and machines can be seen in operation at the Vsesoyuznyy nauchno-issledovatel'skiy institut VNIITISH Akademii stroitel'stva i arkhitektury SSSR (All-Union Scientific Research Institute of the VNIITISH, Academy of Building and Architecture USSR) in Moscow. There are 5 figures.

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SOV/29-59-2-28/41

31(0)
AUTHOR:

Neskorod'yev, N., Engineer

TITLE:

Ships on the Assembly Line (Korabli na konveyyere)

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 2, pp 32-34 (USSR)

ABSTRACT:

In this article the author writes on shipbuilding on the assembly line. The assembly-line work began to develop in the USSR during the 1st Five-Year Plan, at first in the Moscow Automobile Factory (1929); later in the Stalingrad and Khar'kov Tractor Works (1930-1931). At present, many branches of industry work on the assembly line, and also in shipbuilding this type of work has been introduced. After the end of the Civil War, the reconstruction of the navy and merchant fleet was started. Already in 9 years during the first Five-Year Plans (1929-1937), 4 times as many ships were built as in 9 years before World War I. In 1937, a fundamental reconstruction of shipbuilding enterprises was carried out. In 1938 already, 5 times as many merchant ships were built as up to that year. In 1939, as many ships had been completed as within 10 years before the first World War. A particularly intense development of shipbuilding took place in postwar years. Already in the years between 1951

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SOV/29-59-2-28/41

Ships on the Assembly Line

and 1955, the production of freighters and tankers for the ocean-going fleet increased by 2.9 times, that of trawlers by 2.6 times and that of inland ships by 87%. At present, a gigantic atomic icebreaker is being completed for the new powerful whaling base, with a displacement of water of 43,800 tons. A greatly increased development of Soviet shipbuilding will take place in the coming 7 years. The total tonnage of the ocean-going merchant fleet will be doubled. The freight turnover of inland shipping will increase by 1.6 times, especially in Siberia. It is planned to increase the freight space of the engine-driven fleet by about 3 times. All this is only possible due to the introduction of assembly-line work. The figure adjoining shows the construction of a ship at the Shipyard imeni I. I. Nosenko by the assembly-line position method. Here series of trawlers of one type are being built. These trawlers are 84.7 m long, 14 m wide, and have a water displacement of 3,694 tons. The main engine of the ship produces 2000 HP. The new assembly-line position method is based on assembling the ships from individual finished parts. This permits to finish the ships up to 85% before they are launched. At this stage the ship is launched by means of a floating dock and is moored at the pier. Here the remaining 15%

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SOV/29-59-2-28/41

Ships on the Assembly Line

of work is carried out, and the ship is prepared for testing. The assembly of the sections and of the 9 blocks forming the ship is done by means of powerful cranes with a lifting power of 5-200 tons. The powerful crane park, electric welding and the manufacture of block sections on the assembly line make it possible that the trawlers can be built within 4 months. In individual building this work takes several years. There is 1 figure.

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SOV/29-59-6-10/24

25(2)

AUTHOR:

Neskorod'yev, N., Engineer

TITLE:

Universal Devices of the Assembly Type (Universal'no-sbornyye prispobleniya)

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 6, pp 17 - 19 (USSR)

ABSTRACT:

Nikolay Timofeyevich Neskorod'yev, the author of this article, studied at the Moskovskiy avtomekhanicheskiy institut imeni Lomonosova (Moscow Automechanical Institute imeni Lomonosov) and at the Akademiya mekhanizatsii i motorizatsii Sovetskoy Armii imeni I. V. Stalina (Military Academy of Mechanization and Motorization of the Soviet Army imeni I. V. Stalin). After acquiring the diploma of engineer-mechanic, he worked in different branches of industry. Later he was appointed Chief Engineer and Deputy Director of the Laboratory at the Institut mashinovedeniya Akademii nauk SSSR (Institute of Machinery of the Academy of Sciences, USSR). He is the author of many articles on scientific and technical problems. The equipment necessary for the building of a machine is often more expensive than the machine itself, especially where machines are built in small quantities or as single units. After the completion of the ✓

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Universal Devices of the Assembly Type

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machine, the building equipment is no longer needed and has the value of scrap metal. The Engineers V. S. Kuznetsov and V. A. Ponomarev of Moscow were concerned with the problem of such unproductive investments and solved it with success. They created the USP system which is based on the same principle as ~~the~~ building kits for children. The colored insert shows individual elements of USP. It can be distinctly seen how they are used in mounting ~~the~~ ~~the~~ parts. The advantage of the USP system is that milling, grinding, turning, drilling and other machines, the production of which previously cost much time and money, can now be assembled from standardized elements within a few hours. After the completion of work they can be disassembled, and reassembled for other purposes, and thus be used many times. The basis of USP is an assortment of elements for factory use consisting of several thousands of individual parts. Their working life lasts several decades. There are many thousands of machine-building and metalworking factories in the USSR. In many of them, production is on a small scale only. Also in large factories, there are testing workshops where new models are built and old ones are improved. An experience of more than 10 years has shown that with help of USP many investments required for

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Universal Devices of the Assembly Type

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the production of special equipment are saved. In the Moscow Pump Factory imeni Kalinin, the production of USP elements was started in 1955. At present, the factory disposes of more than 9000 parts. By their use, the factory was able to save more than 500000 rubles in the course of 2 years. Similar results were obtained in the Moscow "Kompessor"~~Plant~~. On account of a resolution of the Moskovskiy gorodskoy sovet narodnogo khozyaystva (Moscow Municipal Council of National Economy), a testing plant for USP was established with a technological design office and a central distributing depot. Many factories use this new organization. The Moscow Car Factory imeni I. A. Likhachev, which disposes of a well-equipped toolroom, made also use of the distributing depot, and saved in this way 36000 rubles and 2 tons of metal. In the past year alone, the central distributing depot under the direction of Engineer A. I. Kalmykov lent about 1800 USP sets to 60 factories of various branches. Thus, Moscow factories were able to save about 1.5 million rubles and more than 100 tons of metal. In the present year, already 100 factories make use of the distributing depot. Such organization exists only in Moscow at present. It would be interesting for the entire industry of the country to establish such distributing depots ✓

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Universal Devices of the Assembly Type

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also in other Districts of National Economy. There are 4
figures. ✓

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NEKOROD'YEV, N. A. inzh.

There should be no contrasts. NTO 2 no. 10:59/60 0 '60.

(MIRA 13:10)

(Airports--Equipment and supplies)
(Motor vehicles)

NEKORED'YEV, N., inzh.

The "Zaporazhets" car appears on the roads. NTO 2 no.11:38-39
N '60. (MIRA 13:11)

(Automobiles)

NESKOROD'YEV, N., inzh.

Rebirth of steel. Tekh.mol. 28 no.11:12-13 '60. (MIRA 13:12)
(Steel--Metallography) (Electric welding)

NESKOROD'YEV, N.

The new program inspires. HTO 3 no.9:18-19 S '61. (MIRA 14:8)

1. Stantsiya Khovrino Oktyabr'skoy zheleznoy dorogi.
(Khovrino, Moscow Province--Locomotives--Maintenance
and repair)

NESKOROD'YEV, N., inzh.-mekhanik

With their own hands. Okhr.truda i sots.strakh. 5 no.3:19 № '62.
(MIRA 15:4)

(Khovrino--Railroads--Safety measures)

NESKOVIC, A.

Nomenclature and standards for spare parts, implements, and equipment of basic technical tools. p. 742.

VOJNO-TEHNICKI GLASNIK. Beograd, Yugoslavia. Vol. 3, no. 10, Oct. 1955.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, Sept. 1959.

Uncl.

NESKOVIC, Blazojc; DJORDJEVIC, Rusemir; OPRIJAN, Milenko; VASILIC, Momcilo;
JOKANOVIC, Dobrivoje

Personal results in determination of blood stains and in obtaining
serum precipitate. Srpski arh. celok. lek. 85 no.4:397-410 Apr 57.

1. Institut za sudsku medicinu Medicinskog fakulteta u Beogradu.
Upravnik: prof. dr. Julijana Bogicevic.

(BLOOD

blood stains, determ. technics (Ser))

NESKOVIC, B., dr.; VIDOVIC, V.L., dr.

Influence of the multiple hypothermia on the content and distribution of vitamin C in the suprarenal cortex of white rats. Glas SANU 12 no.2:224 '60 [publ.'62].

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GUZINA, D.; PANTELIC, M.; MILOSAVLJEVIC, A.; BUGARSKI, M.; ZIVKOVIC, S.;
JONAS, S.; NESKOVIC, B.

Use of radioactive iodine in the treatment of hyperthyroidism. Prim.
radioaktiv. izotop. 2 no.3:69-72 D '61.

1. Onkološki institut Medicinskog fakulteta u Beogradu Upravnik: Prof.
dr. Marija Visnjic-Frajnd.

(IODINE ISOTOPES THERAPEUTIC) (HYPERTHYROIDISM)

x

PANTELIC, M.; ZIVKOVIC, S.; JONAS, S.; NESKOVIC, B.; MILOSAVLJEVIC, A.

Use of radioactive iodine in the treatment of thyroid carcinoma.
Prim. radioaktiv. izotop. 2 no.3:73 D '61.

1. Onkološki Institut Medicinskog fakulteta u Beogradu Upravnik:
Prof. dr. Marija Visnjic-Frajnd.

(IODINE ISOTOPES THERAPEUTIC) (THYROID NEOPLASMS)

NESKOVIC, B.A.

A possibility of the application of quantitative autohistoradiography
in detecting iodine I-131 in the thyroid. Acta med. iugosl. 15 no.4:
488-494 '61.

(THYROID GLAND radiog) (IODINE radiography)
(RADIOAUTOGRAPHY)

TRAJKOVIC, V.; NESKOVIC, B.; VISNJIC-FRAJND, M.

Leukemogenic action of the low-voltage X rays administered
in small doses to mice. Bul sc Young 7 no.1/2:11 F-Apr '62.

1. Onkoloski ipstitut Medicinskog fakulteta, Beograd.

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MILOSAVLJEVIC, A.; NESKOVIC, B.; BUGARSKI, M.; PANTELIC, M.; GUZINA, D.

Irradiation of myelofibrosis with radioactive iron.
Bul sc Youg 7 no.1/2:12 F-Ap '62.

1. Onkoloski institut Medicinskog fakulteta, Beograd.

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NESKOVIC, B.; VIDOVIC, Vera; VIDOVIC, V.L.

Effect of several times repeated deep hypothermia on the content and distribution of ascorbic acid in the rat adrenal cortex. Acta med. iugosl. 16 no.1:77-91 '62.

1. Institut de Recherches medicales de l'Academie Serbe de Sciences et des Arts et Institut de Zoologie de la Faculte des Sciences a Beograd.
(HYPOTHERMIA INDUCED) (ASCORBIC ACID) (ADRENAL CORTEX)

5

MILOSAVLJEVIC, Aleksije; GUZINA, Doka; PANTELIC, Mladomir;
BUGARSKI, Miodrag; NESKOVIC, Blagoje

Measurement of blood volume in polycythemia. Srpski arh. celok.
lek. 90 no.4:421-428 Ap '62.

1. Onkoloski institut Medicinskog fakulteta Univerziteta u
Beogradu Upravnik: prof. dr. Marija Vasic-Frajnd.

YUGOSLAVIA

Slobodan ZIVKOVIC and Blagoje NESKOVIC, Department of Oncology
(Onkoloski institut) Head Prof Dr Marija VISNJIC-TRAJND; Medical Faculty
of University of Belgrade.

"Transplantation of the Experimental Rat Fibr sarcoma Bp-S-9 During
the Course of Four Years."

Belgrade, Srpski Srhiv za Celokupno Lekarstvo, Vol 90, No 11, Nov 62;
pp 1069-1069.

Abstract [French summary modified]: From original tumors in 24 rats
injected s.c. with 0.5 cc. of 1% olive oil solution of benzopyrene,
tumor was serially transplanted to 1354 rats of 219 series. Exogenous
cortisone or sex had no effect on tumor transplantability or its
essential behavior. Some histochemical data. Six photomicrographs,
3 tables; 1 Yugoslav and 8 Western references.

1/1

NESKOVIC, Ivan, dr., prim.

Gastroduodenal ulcer during the course of corticotherapy. Srpski
arh. celok. lek. 89 no.7/8:825-833 JI-Ag '61.

1. Dijagnosticko odeljenje Centralne specijalisticke poliklinike.
Sef: prim. dr Ivan Neskovic.

(PEPTIC ULCER etiol)
(ADRENAL CORTEX HORMONES toxicol)

NESKOVIC, Ivan

Prevention of diabetes. Srpski arh. celok. lek. 91 no.10:891-
902 Q*63

1. Savetovaliste za dijabeticare pri Dijagnostickom odeljenju
Centralne specijalisticke poliklinike u Beogradu.

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DURISIC, M.; DRNDARSKI, K.; NEŠKOVIC, I.V.

Effect of ACTH and hydrocortisone on experimental tuberculosis
in guinea pigs. Acta med. iugosl. 15 no.3:290-301 '61.

1. Mikrobioloski institut Medicinskog fakulteta u Beogradu.
(CORTICOTROPIN pharmacol) (HYDROCORTISONE pharmacol)
(TUBERCULOSIS exper)

NEŠKOVIC, A.

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(HYPERINSULINISM exper)
(ERYTHROCYTES)
(POTASSIUM pharmacol)
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NESKOVIC, M.; RAKIC, Lj.

The influence of repeated insulin hypoglycaemic comas on the resistance of erythrocytes in animal before and after normalization of resistance following initial hypoglycaemic coma. Acta med. iugoslavl. 14 no.4:383-392 '60.

1. Institute of Physiology, Medical Faculty University of Belgrade.
(HYPERTINSULINISM exper) (ERYTHROCYTES)

NESKOVIC, Milutin V.; BOJANOVIC, Jelena J.; MLADENOVIC-STOIMIROVIC,
Zagorka T.; STEFANOVIC, Ljubica S.; KULIC-JAPUNDZIC, Ivanka M.;
CORBIC, Milanka O.; KOSTIC, Dusan M.

Metabolic relation of lipides, glycodes and proteins. I.
Changes of glycemia, nonesterified fatty acids and total
proteins of blood plasma in the alimentary hyperlipemia of
dogs, provoked after fasting. Glas Hem dr 25/26 no.5/7:345-352
'60/'61.

1. Medicinski fakultet, Biohemijski institut, Hemijski
institut, Beograd.

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NESKOVIC, M.V.; ZIVKOVIC, R.; CORBIC, M.O.; BOJANOVIC, J.J.; MLADENOVIC
STOJIMIROVIC, Z.T.

Metabolic relations of proteins, lipids and glucides. IV. The effect
of the intravenous injection of glucose on the fatty acids of the blood
plasma in dogs during alimentary hyperlipemia produced after fasting.
Acta med. iugosl. 16 no.2:213-221 '62.

1. Biokemijski institut i Hemijski institut Medicinskog fakulteta u
Beogradu.

(GLUCOSE) (BLOOD LIPIDS) (FATTY ACIDS) (FASTING)

BOGICEVIC, D.; NESKOVIC, S.; JEFTOVIC, Z.

Extrapyramidal phenomena in epilepsy. Neuropsychiatria 11 no.2:
191-197 '63.

1. Iz Neuropsihijatrijskog odeljenja Bolnice "Dr. Dragisa Misovic"
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Modification of the M.I.Grossman method for determining nonesterified fatty acids in biological fluids. Glas Hem dr 28 no.5/6:301-344 '63.

1. Institute of Biochemistry of the Faculty of Medicine, University of Belgrade, Belgrade. Submitted February 28, 1963.

NEŠKOVIC, P

DURISIC, Milutin; NEŠKOVIC, Predrag

Use of tuberculin for excitation in the treatment of tuberculosis with streptomycin and with isonicotinic acid hydrazide. Acta pharm.jugosl. 5 no.2:75-82 '55.

1. Mikrobiološki Institut, Medicinski Fakultet, Beograd.
 - (STREPTOMYCIN, effects,
 - on exper. tuberc., eff. of tuberculin)
 - (NICOTINIC ACID ISOMERS, effects)
 - isoniazid, on exper. tuberc., eff. of tuberculin)
 - (TUBERCULOSIS, experimental,
 - eff. of isoniazid & streptomycin, eff. of tuberculin on reactivity)
 - (TUBERCULIN, effects,
 - on exper. tuberc. reaction to streptomycin & isoniazid)

BOCINA, Branko; NESKOVIC, Sofija

A case of idiopathic hypoparathyroidism with mental changes. Srpski
arh. celok. lek. 89 no.11:1357-1361 N '61.

1. Neuropsihijatrijsko odeljenje Bolnice "Dr Dragisa Misovic" u Beogradu
Sef: prim. dr Vladislav Klajn Interno odeljenje Bolnice "Dr Dragisa
Misovic" u Beogradu Sef: prof. dr Frano Bulic.

(PARATHYROID GLAND dis)
(MENTAL DISORDERS etiol)

S

DURISIC, M.; NESKOVIC, V.

Is "desensitizing energy" an immune condition? Contribution to the study of acquired immunity in tuberculosis. Tuberkuloza, Beogr. 12 no.1:55-59 '60.

1. Mikrobioloski institut Medicinskog fakulteta, Beograd
(upravnik: prof. dr. M. Durisic).
(BCG VACCINATION)

DMITRAK, Yu.A.; NESKREBA, A.V.; YAKOVLEV, A.B.

Industrial testing of KG-1 machine units. Trudy TSHIIPod-
zemshakhstroia no.2:82-89 '63. (MIRA 17:5)

DMITRAK, Yu.A., inzh.; NESKREBA, A.V., inzh.

Results of industrial tests of the KG-1 unit. Shakht. stroi. 7
no.6:11-13 Je '63. (MIRA 16:7)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-konstruk-
torskiy institut podzemnogo shakhtnogo stroitel'stva.
(Mining machinery--Testing)

NESLEROVA, N. M.

USSR/General Questions

A

Abs Jour: Ref Zhur-Khimiya No. 7, 1957, 21877

Author : Neslerova, N. M. and Pudovik A. N.

Inst : None

Title : Boris Aleksandrovich Arbuzov, (Bibliography)

Orig Pub: M. AN SSSR 1956, 48 p., 1 rouble

Abstract: No Abstract

Card 1/1

NESLUKHOVSKIY, K. S.

"BESM" Part IV, Publ. House of the Acad. Sci. USSR, 1952

NESLUKHOVSKIY, K. S.

"Comparison of Parallel and Series Universal Computing Machines with and Without Recognition of the Radix" a paper presented at the Conference on Methods of Development of Soviet Mathematical Machine-Building and Instrument-Building, 12-17 March 1956.

Translation No. 596, 8 Oct 56

Neslukhovskiy, E.S.

26(2)	PLANE 1 BOX EXPLOSION	507/2673
Review.	Don nauchno-tekhnicheskoy propagandy in P. S. Darnitskiy	
	Tekhnicheskaya tekhnika i yazyk grammatiki (Computation Technique and Its Application) Moscow, Gosizdatstat, 1959, 391 p. (Series: Oshcheshchevo po rasprostraneniye politicheskikh i nauchnykh knizhnykh izdaniy) 5,000 copies printed.	
	M. (Title page): S. A. Lebedev, Academician; Ed. (Inside book): V.I. Savast'yev; Tech. Ed.: G. I. Matveyev.	
	PURPOSE: This collection of articles is intended for scientific, engineering and technical personnel engaged in research, design and operation of digital and analog computers. It may also be used by students of these specialties in captions.	
	CONTENT: The authors present fundamentals of digital computers, their elements and units such as arithmetic units, internal and external memory and control devices. They discuss the possibility of constructing computers using semiconductor elements and consider the fundamentals in the theory of logical circuits. They also discuss problems of programming and explain the operation of analog computers and their elements. Brief discussion of mathematical instruments is also presented. The articles were presented at a computer seminar arranged by Mezhdunarodnyy nauchno-tekhnicheskoy prognoznoy kabin P. S. Darnitskiy, Center for Scientific and Technical Propaganda Lenin P. S. Darnitskiy in 1957. As personalities are mentioned. References appear at the end of each article.	
	Zimov, A. M., Engineer. Construction of High-Speed Computers Using Semiconductor Elements 185	
	The author discusses the possibility of using transistors in computer circuits and describes the operation of the following transistor circuits: amplifiers, pulse forming circuits, triggers and direct-coupled transistors. There are 4 references; 1 Soviet and 3 English.	
	Belobukhinsky, I. S., Devices of Series Computing Machines. 207	
	The author discusses the construction of series computing machines such as analog trigonometric circuits for transforming codes, adding and subtracting circuits and circuits for determining coincidence of two codes. He also describes the operation of a series-type memory unit. There are 10 references.	
	Shabrov, V. B., Candidate of Technical Sciences. Electronic Analog Computers for Solving Differential Equations 209	
	The author presents a general discussion of analog computers and considers fields of their application. He presents a table of Soviet computers, giving specifications, year of manufacture and the developing organization. There are 11 references, all Soviet (including 1 translation).	
	Klitenberg, I. M., Candidate of Technical Sciences. Operational Units of Analog Computers 297	
	The author discusses the operation of various units in a computer such as adders, multipliers, integrators, differentiators, and other units. He also discusses the operation of analog computers and analyzes their circuits. There are 13 references, all Soviet (including 1 translation).	
	Gluberg, E. A., Engineer. Use of Analog Computers in Engineering and Scientific Analysis 337	
	The author discusses the use of analog computers for analyzing performance of various industrial machinery such as rolling machines, dynamoelectric amplifiers, hydraulic motors, etc. Use of analog computers for solving hydraulic equations is also discussed. There are 8 references, all Soviet (including 2 translations).	
	Gluberg, E. A., Engineer. Methods of Solving Problems for Analog Computers and Checking Accuracy of Solutions 340	
	The author discusses the procedure of reducing problems to a form suitable for units. He describes methods of connecting various computer units. He explains methods of determining proper scale factors and transfer coefficients and presents examples of calculations. He also discusses methods of solving nonlinear functions and considers computer accuracy. There are no references.	
	Famenniy, V. V., Candidate of Technical Sciences. Modern Small Mathematical Instruments 366	
	The author discusses the construction and operation of mathematical instruments such as integrators, integrators and planimeters. He also describes the construction of instruments developed by Nader, Coradi and Henrici and explains the operation of instruments for analyzing random functions. There are 14 references, 7 Soviet (including 4 translations) and 7 English.	

16(2)

SOV/2-59-2-3/12

AUTHOR: Neslukhovskiy, S.

TITLE: To Quickly and Fully Process the Materials of the All-Union Population Census (Svoyevremennno i vysokokachestvenno razrabotat' materialy vsesoyuznoy perepisi naseleniya)

PERIODICAL: Vestnik statistiki, 1959, Nr 2, pp 34 - 44 (USSR)

ABSTRACT: The article deals with the census of the USSR population (starting with a conference of statisticians on 8-9 December 1958, organized by the Tsentral'noye statisticheskoye upravleniye ("TsSU") of the USSR, and completed in February 1959) and the organization of the processing of the results that must be finished by the end of 1959. The processing of the census data will be much more complex than that of the 1926 and 1939 censuses. It will require complex group combinations to reveal a variety of population categories (by sex in all separate territories, by national majorities, by age, social groups and income sources).

Card 1/2

sov/ 2-59-2-3/12

To Quickly and Fully Process the Materials of the All-Union Population Census

After the country-wide processing, there will be additional processing in separate territories, to be carried out in 1960 to provide statistical data for the administrations of republics, oblasts and krays. The Tsentral'naya mashinoschëtnaya stantsiya (Central Calculating Machine Station) for the census is equipped with 150 tabulators specially adapted for the work, 114 sorting machines, as well as adding and printing machines, and will have a staff of 1,300 workers. There will be 57 calculating machine stations ("MSS") at the Statistical Offices of republics, oblasts and krays. An electronic attachment for reproducing and tabulating machines that will mechanize the process of calculating the mean and relative numbers is mentioned.

Card 2/2

NESLUKHOVSKIY, Kirill Sergeyevich; FAYNBOYM, I.B., nauchnyy red.; GVOZDEV,
V.A., red.; KORMAN, V.M., tekhn. red.

[Electronic computers] Elektronnye vychislitel'nye mashiny. Moskva,
Ob-vo po raspr. polit. i nauchn. znaniy RSFSR, 1960. 39 p.
(MIRA 14:7)

(Electronic calculating machines)

NESELUKHOVSKIY, K.S.

[Digital integrating analysers; main operating principles]
TSifrovye integriruyushchie mashiny; osnovnye printsypy
raboty. Moskva, Akad.nauk SSSR, In-t tekhnoi mekhaniki i
vychislitel'noi tekhniki, 1960. 106 p.

(MIRA 14:2)

(Electronic digital computers)

NE SLUKHOVSKIY, R.S.

PHASE I BOOK EXPLOITATION

SOV/5027

Nauchno-issledovatel'skiy institut schetnogo mashinostroyeniya

Voprosy rascheta i konstruirovaniya elektronnykh vychislitel'nykh mashin, vyp. 1,
(Problems of the Calculation and Design of Electronic Computers, v. 1) Mos-
cow, Mashgiz, 1960. 194 p. Errata slip inserted. 8,000 copies printed.

Ed.: N.Ye. Kobrinskiy, Doctor of Technical Sciences; Ed. of Publishing House:
A.G. Akimova; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Machine
Building and Instrument Construction: N.V. Pokrovskiy, Engineer.

PURPOSE: This collection of articles is intended for scientists and technicians
working in computing-machine building and related fields.

COVERAGE: This collection of articles presents the results of investigations
related to the design and development of electronic computers. It examines
the realization of some general and special algorithms by means of digital
and analog computers, investigates errors in the realization of functional
relationships in electronic analogs, and reviews problems of computing and
designing the external outfits and arrangement of digital computers based
on various principles of operation. Methods of computation and the basic
characteristics of stabilized supply sources for digital and analog computers,

-Card 1/4

Problems of the Calculation (Cont.)

SOV/5027

methods of computing standard circuits, and problems related to their reliability are examined. No personalities are mentioned. References accompany some of the articles.

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PART I. GENERAL PROBLEMS OF COMPUTER DESIGNING

Alferova, Z.V. Principles of Designing Logical Circuits of Information-Processing Programs for Calculations	3
<u>Neslukhovskiy, K.S.</u> [Possibilities of] Using Electronic Computers for the Mass Processing of Statistical Data	24
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NESLUKHOVSKIY, K. S.

PHASE I BOOK EXPLOITATION

80V/4162

Golovistikov, Petr Petrovich, Aleksey Nikolayevich Zimarev, and Kirill
Sergeyevich Neslukhovskiy

Arifmeticheskoye ustroystvo i ustroystvo upravleniya BESM (Arithmetical and Control
Units of the BESM / High-Speed Electronic Computer/). Moscow, Fizmatgiz, 1960.
244 p. (Series: Elektronnaya tsifrovaya vychislitel'naya mashina BESM, 2)
15,000 copies printed.

Ed. (Title page): S.A. Lebedev, Academician; Ed. (Inside book): Yu. M. Bezborodov;
Tech. Ed.: S.N. Akhlanov.

PURPOSE: This book is intended for workers in computing centers, students,
aspirants, and scientific personnel employed in the field of computational
mathematics.

COVERAGE: The book is the second volume in a series of works on the BESM-2, a modern
version of the BESM, a universal, high-speed, digital computer developed by the
Academy of Sciences USSR. The book discusses: the circuits of the arithmetic and
control units; the basic standard blocks comprising the circuits of the arithmetic
and control units; and methods of constructing on these elements the fundamental
components of the computer: registers, counters, accumulators, decoders, etc.

Card ~~1/5~~

Arithmetical and Control Units of the BESM (Cont.)

SOV/4162

In addition, the book discusses fundamental aspects of the arithmetic unit and describes how various elementary operations are carried out by means of the circuits of the arithmetic unit. The functional circuits of units for numbers and orders are described in detail. The book discusses the underlying principles of the control unit's construction and the realization of its components and blocks. A study is made of the operation of circuits during the execution of various arithmetical and special operations by the control unit. P.P. Golovistikov wrote chapter III, A.N. Zimarev chapters I and II, and K.S. Neslukhovskiy, chapter IV. They belong to the Institut tochnoy mekhaniki i vychislitel'noy tekhniki AN SSSR (Institute of Precise Mechanics and Computer Technology of the Academy of Sciences USSR). The authors thank Yu. M. Bezborodov. There are no references.

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4. Shapers	18

Card 2/5

HESLUKHOVSKIY, K.S.

Possibilities of using electronic computers in large scale statistical
data processing. Vop. rasch. i konstr. elektron. vych. mash. no.1:
24-43 '60. (MIRA 14:1)

(Electronic data processing)

L 18212-63

EW(d)/FCC(w)/BDS

ASD/ESD-3/APGC/IJP(G) Pg-4/Pk-4/Po-4/

Pg-4 GG

ACCESSION NR: AT3001875

S/2906/62/000/000/0059/0070

AUTHOR: Neslukhovskiy, K. S.

TITLE: Some problems in the design of digital differential analyzers of the series type 74
16C

SOURCE: Kombinirovannyye vychislitel'nyye mashiny; trudy II Vsesoyuznoy konferentsii-seminara po teorii i metodam matematicheskogo modelirovaniya.
Moscow, Izd-vo AN SSSR, 1962, 59-70

TOPIC TAGS: computer, analyzer, digital, differential, plugging, key marks, code, integrator, initial condition.

ABSTRACT: The paper examines the design of a control equipment for digital differential analyzers (DDA) in which the programming of a problem is performed by means of commutation by plugging jumper chords. The introduction of initial conditions is performed by connecting special receptacles by means of plugs. Schematic circuitry is shown and examples are illustrated. The plugging equipment is constructed in the form of panels with outlet receptacles, arranged on a control switchboard. The panels are removable, and each panel permits the connection of a specified number of integrators and the plugging in of suitable initial

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conditions. The machine may also be operated according to a program stored in a memory equipment. In digital differential analyzers either the binary or the binary-decimal systems can be and are employed. As a rule, a series-coding system is employed in binary systems, a parallel-series method in binary-decimal systems. The paper examines the integrating block (arithmetic equipment) of a DDA of the series type with a replaceable counting system. The circuitry of the integrating block can be switched to either binary or binary-decimal operation. The switching can be accomplished either manually or automatically by key marks recorded and included in the program of each integrator. The key-mark system has the advantage of permitting the translation of quantities from one system into the other. Details of the translation circuitry are shown, and 4 illustrative examples are shown. The details of the key-mark system are explained. Key marks permit control of the following operations: (1) Setting up of a sign function; (2) inversion of the sign of the output signals of an integrator; (3) transmission of the output onto a printing equipment; (4) transmission of the integrator output to a graph-drawing equipment; (5) performance of certain functions by servointegrators; (6) restraining operations performed by servointegrators; (7) changes from binary to binary-decimal counting systems in the integrators; (8) introduction of scale factors; (9) transmission of input data from other equipments and output to other equipments; (10) selection of channels when

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transmission as stated under (9) is by multiple channel. Orig. art. has 13 figs.
and 1 numbered equation.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 11Apr63

ENCL: 00

SUB CODE: CP, MM

NO REF SOV: 000

OTHER: 000

Card 3/3

~~NESLUKHOVSKIY, Kirill Sergeyevich~~; SOLOV'YEVA, L.A., red.;
AKSEL'ROD, I.Sh., tekhn. red.

[Digital differential analyzers] TSifrovye differentsial'-
nye analizatory. Moskva, Fizmatgiz, 1963. 303 p.
(MIRA 17:3)

OREKHOV, K.A.; MAKSIMOV, G.M.; NESLUKHOVSKIY, S.K.; ROZDOLOVSKAYA,
V.V.; SMIRNOV, K.A.; VEYS, L.V.; ANTYUFYEVA, A.M.; KURGANOV,
M.A.; STEPANOVA, Ye.A.; VOSTRIKOVA, A.M.; SAKHAROVA, V.V.;
POD*YACHIKH, P.G.; OREKHOV, K.A., otv. za vypusk; CHUPHOVA,
Yu.S., red.; PYATAKOVA, N.D., tekhn. red.

[Results of the 1959 All-Union population census; the Kazakh
S.S.R.] Itogi Vsesoiuznoi perapisi naseleniia 1959 goda;
Kazakhskaiia SSR. Moskva, Gosstatizdat, 1962. 201 p.

(MIRA 16:4)

1. Russia (1923- U.S.S.R.)TSentral'noye statisticheskoye
upravleniye.

(Kazakhstan--Census)

BARMASH, A.I., kand.tekhn.nauk; DERGUNOVA, A.A., starshiy nauchnyy sotrudnik;
DYKLOP, V.K., kand.bilogicheskikh nauk; DUBROVINA, L.I., mladshiy
nauchnyy sotrudnik; TRUDOLYUBOVA, G.B.; POLETAYEV, T.H.; V rabote
prinimali uchastiye; LAVROVA, L.P.; POZHARISKAYA, L.S.; ZUYEVA, L.D.;
KALITA, L.A.; NESLYUZOV, A.F.; GOL'DMAN, Ye.I.; MAKEYEVA, M.N.;
STEFANOV, A.F.

Use of blood in sausage manufacturing and canning. Trudy VNI IMP
no.9:63-74 '59. (MIRA 13:8)

1. Vsesoyuznyy nauchnoy-issledovatel'skiy institut myasnoy promy-
shlennosti (for Lavrova, Pozhariskaya, Zuyeva, Kalita, Neslyuzov).
2. Spetsialisty Moskovskogo myasokombinata (for Gol'dman, Makeyeva,
Stefanov).
(Blood as food or medicine) (Sausages)
(Canning and preserving)

NESMACHNAYA, A. K.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

"Electrical Methods of Determining Short-Circuited Turns in the Frames and Coils of Electrical Measuring Instruments and Relays," 16 June 1947. An investigation was made of existing assemblies for determining short-circuited turns on the basis of different principles; means are indicated for the theoretical and experimental analysis of the principle which can be used as a basis for calculating and designing a sufficiently sensitive and simple-to-operate assembly.

SO: M-1048, 28 Mar 56

NESMACHNYY, A.

A young worker came to the plant... Sov. profsoiuzy 20 no.1:31
Ja '64. (MIRA 17:2)

1. Organizator profsoyuznoy gruppy uchastka sborki parovykh turbin
Khar'kovskogo zavoda imeni Kirova.

S/130/61/000/005/005/005
A006/A101

AUTHOR: Nesmachnyy, A. N., Senior Master of the "2800" mill

TITLE: Performance of hardfaced rolls

PERIODICAL: Metallurg, no. 5, 1961, 27

TEXT: To increase the service life of new 60XH (60KhN) steel 1150 mm diameter working rolls of a two-high plate rolling mill, they are hardfaced by a method developed by Ye. O. Paton. The rolls preheated in 3 inductors, were initially hardfaced in two layers by one pass with two A-384 machines. The heating temperature was kept constant with the aid of a fourth inductor mounted in front of the devices and moving with them. The inductors were switched off every 10 - 15 minutes to reduce the temperature drop along the roll and to assure graduated heating, and switched on again 5 - 10 minutes later to repeat the cycle; the heating lasted for 20 h. Hardness of the built-up layer of the roll barrel surface was 70 - 75 Shore units. The roll was then heated in the inductors to 370 - 380°C and cooled for 72 h in a warmed box. Hardfacing was carried out with ПП 3Х2В8 (PP3Kh2V8) wire and АН 20 (AN20) flux. During operation of the rolls, cracks appeared in the hardfaced layer and spread into the roll body, entailing breakdown of the barrel. The cracks were stated to be due to

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Performance of hardfaced rolls

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thermal stresses during preheating of the rolls. It was revealed that between the hardfaced layer and the roll base, there was an intermediate zone of hardness exceeding that of the roll. Presently, the relative low wearing-out of the hardfaced layer makes it possible to apply only one hardfaced layer. This improves temperature conditions and reduces the number of failures. A roll with a 4-mm thick hardfaced layer of 1.150 mm in diameter, operates at increased hardness until a diameter of 1.130 mm. To approach the roll temperature to the working conditions (60 - 80°C), they are preheated in a special vapor bath at 5 - 6 atm pressure for 16 h, whereby the vapor jet should not fall upon the rolls directly. After 4 h the rolls are removed from the bath and rolled at normal speed. They show high wear resistance of the surface and can be employed for over a month. However, to prevent cracking, the rolls are exchanged every 7 - 10 days. Visible cracks are removed by grinding and the rolls are stored to relax the stresses after rolling and to increase their performance capacity. The described methods of hardfacing and performance reduced the amount of failures and stillstand of roughing stand rolls.

ASSOCIATION: Zavod imeni Voroshilova(Plant imeni Voroshilov)

Card 2/2

KCCHO, V.S., doktor tekhn. nauk; BARZILOVICH, V.S.; LYADOV, K.P.;
NESMACHENYY, A.N.

Improving the operation of roller hearth heating furnaces.
Met. i gornorud. prom. no.1:71-72 Ja-F '64.

(MIRA 17:10)

KOOHO, V.S., doktor tekhn. nauk; BARZILOVICH, V.S.; PRIADKIN, L.L.;
NESMACHNYY, A.N.

Automatic control system for heat-treating furnaces with
roller sole. Avt. i prob. no.4:77-79 G-D '64 (MIRA 18:2)

BURMISTROVA, T.P.; TERPILOVSKIY, N.N.; NESMALOV, V.V.

Influence of certain factors on froth-forming process during the
oxidation of p-xylene. Trudy KKHTI no.30:289-295 '62.

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NEKASHNYI, Mitrofan Sergey; NEKASHNYI, M.I., otvetstvennyy red.;
TRUFONIKOVA, B.A., konsultor izdatel'stva; KOROVENKOVA, Z.A.,
tekhnicheskii redaktor

[Gas meter operator in coal mines] Gazovershchik na ugol'noi
shakhte. Izd. 2-oe. Moskva, Ugletekhnizdat, 1957. 63 p.
(Gas meters) (Nine years) (RLE 19:19)

NESMASINYYE, Ye.V.; PIGULEVSKIY, Ye.D.

Ultrasonic method of studying porous media. Defektoskopiya
no. 5:22-24 '65 (MIRA 19:1)

L. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova
(Lenina).

NESMELOV, A.F., inzhener; KAZAKOV, I.M., inzhener, redaktor.

[Truing polishing wheels] Pravka shlifoval'nykh krugov. Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroit.i sudostroit. lit-ry,
1953. 109 p. (MLRA 7:3)

(Grinding and polishing)